

CLAIMS

What is claimed is:

1. A hydrophobic composition for use in water applications comprising:
a hydrophobic carrier; and
5 a microbial agent, wherein the combination of the hydrophobic carrier and the microbial agent allows for the uniform and efficient distribution of the hydrophobic composition over the surface of and into the water application.
2. The composition of claim 1 wherein the hydrophobic carrier comprises carbon minerals, plastics, wood powder, plant materials, clays or combinations thereof.
- 10 3. The composition of claim 2 wherein said carbon minerals are selected from a group consisting of coal, charcoal, graphite, carbon black, oil, straw or combinations thereof.
4. The composition of claim 1 wherein the microbial agent comprises fungi, bacteria, nematodes, protozoan and combinations thereof.
- 15 5. The composition of claim 4 wherein said bacteria is *Bacillus subtilis*.
6. The composition of claim 1 further comprising mineral fertilizers.
7. The composition of claim 1 wherein the hydrophobic composition comprises about 4.5×10^6 cfu/g of hydrophobic composition to about 4.5×10^{10} cfu/g of hydrophobic composition.
- 20 8. A method for improving the water quality of a water application comprising the steps of:
introducing a hydrophobic composition to the water application, wherein the hydrophobic composition comprises a hydrophobic carrier and a microbial agent,
wherein the hydrophobic composition distributes the microbial agent
25 efficiently and uniformly over the surface of and into the water application, and

wherein the hydrophobic composition improves the water quality of the water application.

9. The method of claim 8, wherein the hydrophobic composition reduces nitrates and phosphates in a water application.

5 10. The method of claim 8, wherein the hydrophobic composition reduces suspended solids and dead organic matter in a water application.

11. The method of claim 8, wherein the hydrophobic composition deodorizes a water application.

10 12. The method of claim 8, wherein the hydrophobic composition controls the growth of algae in a water application.

13. The method of claim 8, wherein the hydrophobic carrier confers UV protection to the microbial agent.

14. The method of claim 8, wherein the hydrophobic carrier provides a matrix for further growth of the microbial agent.

15 15. The method of claim 8, wherein the hydrophobic composition is applied to the water application at rates of about 1 g/m² to about 1.5 g/m².

16. The method of claim 8, wherein the hydrophobic composition is applied to the water application at rates of about 100 cfu/m² to about 10 X 10¹⁰ cfu/m².

20 17. The method of claim 8, wherein said hydrophobic carrier comprises carbon minerals, plastics, wood powder, plant materials, clays or combinations thereof.

18. The composition of claim 17, wherein said carbon minerals are selected from a group consisting of coal, charcoal, activated charcoal, graphite, carbon black, oil, straw or combinations thereof.

25 19. The method of claim 8 wherein said microbial agent comprises fungi, bacteria, nematodes, protozoan and combinations thereof.

20. The method of claim 19, wherein the bacteria comprises *Bacillus subtilis*.

21. The method of claim 8, wherein the hydrophobic composition hydrophobic composition comprises about 4.5×10^6 cfu/g of hydrophobic composition to about 4.5×10^{10} cfu/g of hydrophobic composition.

5 22. A hydrophobic composition for use in controlling algae growth in water applications comprising charcoal and *Bacillus subtilis*, wherein the combination of charcoal and *Bacillus subtilis* result in the uniform and efficient distribution of the hydrophobic composition over the surface of and into the water application.

10 23. A method for controlling algae growth in water applications comprising the steps of :
introducing a hydrophobic composition comprising charcoal and *Bacillus subtilis* to the water application at a rate of about 0.5 g/m^2 to about 1.5 g/m^2 ,
wherein the hydrophobic composition distributes the *Bacillus subtilis* efficiently and uniformly over the surface of and into the water application, and
15 wherein the hydrophobic composition controls the amount of algae in the water application.

24. A method for delivering microbes efficiently and uniformly to water applications comprising:
introducing the hydrophobic composition to the water application, wherein
20 the hydrophobic composition comprises a hydrophobic carrier and a microbial agent, and
wherein said hydrophobic composition distributes the microbial agent efficiently and uniformly to the water application.

25. A method for controlling algae growth in a water application comprising the step of:
25 introducing *Bacillus subtilis* to the water application wherein the *Bacillus subtilis* controls algae growth.

26. A method for treating water comprising the step of:
introducing *Bacillus subtilis* to a water application.